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THOUGHTS ON FORCE AND DISEASE.

(Read before the Northern Medical Association, of Philadelphia, January 22d, 1875.

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The law of the conservation of energy, whose universality was first announced by a physician, is firmly rooted in science. We are all, with Herbert Spencer, beginning to believe that the sole truth which transcends experience by underlying it, is that of the persistence of Force. Like matter, force is indestructible; and no appliance can beget or increase it. All forms of force, vital and mental manifestations included, are correlated. They are, in a comprehensible sense, convertible. This evening, gentlemen, I propose to call attention to a few of the possible applications of the doctrines of Force or Energy to the study of disease. The term *Energy*, as used in physics, and in this essay, is due to Thomas Young. It is the power of doing work against any force. Potential energy is what a body can do; kinetic energy is what we can recognize it as doing. The former is also known as possible energy, or the energy of position; the latter, as dynamic, or actual energy, or the energy of motion. A pound weight projected upward has a certain amount of kinetic energy, owing to its velocity. When it attains its greatest height, its kinetic energy is all spent, it is converted into energy potential. It gains a position of advantage. During its descent, a reconversion takes place; but when it has fallen the energy is once more potential. The sum of the potential and kinetic energy in the universe is a constant quantity; hence, the doctrine of the *conservation of energy*. The so-called forces of nature are simply phases of this universal energy, and the conversions of one force into another are often the transmutation of kinetic into potential energy, or the reverse.

The ultimate sources of energy have been classified by Balfour Stewart as follows:—1. Potential energy of food, of fuel, of a head of water; that derived from the tides; and of chemical separation implied in native sulphur, native iron, etc. 2. Kinetic energy of air in motion, of water in motion, of the direct solar rays; and that derived from the unequal temperature of different parts of the earth.

Sir William Thomson is the author of a doctrine known as the *Dissipation of Energy*, according to which a tendency to the degradation of the form of energy exists. The potential is being slowly but steadily transferred to the dynamic. Through the radiation of heat into space, celestial systems are running down to lower planes of power. Because of this universal tendency to the dissipation of mechanical energy, the earth must have been in the past, and must again be in the future, unfit for man's habitation, unless unknown operations have been or are to be performed.

Presuming that every intelligent physician is somewhat familiar with recent ideas upon the general subject of Force or Energy, I will pass at once to some thoughts upon pathological dynam-

ics. Our best authorities stumble in attempting to define disease. It is sometimes spoken of as an opposite state to that of health; but is it always this? Is it ever exactly this? Health and disease are certainly varying conditions; but not absolutely antagonistic. They are often separated by an uncertain line. One is shingled over the other. Like all knowledge (according to Spencer), all conditions are relative. The normal imperceptibly declines into the abnormal, and by scarcely recognizable gradations, the latter passes up into the former. We should not draw too heavily the lines which divide operations going on within and without the body; nor dig a gulf too broad and deep between normal and abnormal phenomena.

The average human mind inclines to give orm and magnitude to idealities, or dynamicalities, if I may be allowed the expression. Men speak of disease as an entity: but it is not eruption, carbuncle, or necrosis; it is not the cirrhosed liver, the tuberculous lung, or the hyperæmic brain, any more than sound is the clanging bell, light the brilliant combustible, or electricity the discharging Leyden jar. Are not pathological manifestations simply phases of energy? In our zealous search after materies morbi, we must not lose sight of the dynamical element in disease. "Imponderable matter" was the term not long since applied to such physical forces as heat, light, and electricity; but now we understand that they are modes of motion; and similarly, pathological phenomena are forms of motion. Disease, in this sense, means vibration—brain vibration, nerve vibration, muscle vibration, bone vibration—tissue vibration, in short. Disease might be looked upon as evolved from primordial force; in its multiple form as the complex evolution of a primal departure from normal conditions.

The human organism has been compared by Magrini to an elastic system, whose different parts vibrate in unison with a certain number of undulations, each of which produces a complete effect independently of the others, but all act in harmony. When all the forces acting on a body are mutually counterbalanced, they and the body on which they act are said to be in equilibrium. Equilibrium is not synonomous with rest. It implies motion or action, but action with a uniform effect. Dynamically, health may be said to be equilibrium, disease the disturbance of this equilibrium. In morbid processes, new forces do not necessarily come into play; but rather old forces become perturbed. In health, the sum of the molecular and massive activities in a given individual might be considered as equal to a constant quantity and state of equilibrium; in disease, this constant is temporarily changed, or the activities improperly distributed.

The forces of disease are correlated with each other, and with the natural forces in general. Animal heat, fever heat, and stove heat are essentially the same, and must have analogous causes. Cellulose and starch are chemically isomeric. Machines feed on one, and animals on the other; hence, they both derive the forces by which they are run from substantially the same source. The so-called transformations of diatheses, diseases, and symptoms can best be explained on the principles of force-correlation. Pathological energy of one kind or degree becomes pathological energy of another, as light is changed into electricity, or chemical affinity and heat into vitality. Energy is called from one part of the system to another, or from various points to one morbid rendezvous.

It is not my purpose this evening to give many illustrations, special or general, of pathological correlation. Examples of disease transformations are extremely familiar, and have frequently been pointed out by different writers, and with varying objects in view. I will adduce a few. We see chorea taking the place of rheumatism or skin affections; gastralgia alternating with leucorrhœa; burns of the skin inducing duodenal ulcers; or gout giving rise to a multitude of symptoms. It is well known that the nervous diathesis often seems to be a protection against febrile and inflammatory disorders: and, on the other hand, fevers have restored to good health patients suffering from nervous disease; even mania has been thus relieved. The intimate relationships existing between such conditions as cancer, tuberculosis, scrofula, and syphilis have long been recognized, and fair evidence in favor of their inter-changeability has frequently been brought forward. If we go to the roots of these and similar phenomena of disease, I do not doubt but that we will there find the principle of the persistence of force. They are embraced under the great generalization, the law of the conservation of energy.

Is not the question of hereditary influence in the transmission of disease one simply of potential and dynamic energy? Phthisis, syphilis, or insanity, for instance, is manifested actively in

one generation, illustrating dynamic or kinetic energy. In the offspring of this generation, disease may be active or passive. It may be of the same or a different type from the original disorder. The syphilitic parent may have a syphilitic, tuberculous, or insane child; or insanity in the parent may show itself as chorea or epilepsy in the child. Kinetic energy of one kind in the first generation becomes kinetic energy of another in the second; or, instead of this programme, a still more curious one may be followed. Inherited disease in a second generation may remain passive, or latent, that is, *potential;* and in a third show itself in a dynamic form. Perhaps not until a fourth or fifth generation, will this potentiality of disease become an active power. Interchanges of diseases have been clearly traced through five generations.

The nervous system affords some of the most striking examples of correlation. Wonderful blendings and combinations are often witnessed. We are constantly greeted with transformation scenes. One disease passes into another. Two or more disorders are found in one individual. Diseased action of one nervous centre is suddenly transferred to another. Mental disturbance and nervous disease of a lower order are observed interchanging. For the elucidation of some, at least, of the problems presented, with our present knowledge and modes of observation, pure dynamics is our only refuge. In many cases structural changes cannot be discovered, hence the laws which govern ordinary material phenomena will not answer, or must be carried by the trained imagination into the sub-sensible world. Let me be clearly understood. Because we cannot ascertain the material causes of a disease, I do not hold that they do not exist. In primary concussion of the spine, serious results may ensue without discoverable lesion, changes in the rates of molecular vibration probably resulting from the violent shaking up of nervous matter. Such pathological phenomena are not more wonderful and incomprehensible than the thermal and luminous manifestations which arise from molecular activities. The wave theory of light rests on assured foundations, and yet it is based upon the existence of an ether which eye has not seen, nor ear heard, but which it *has* entered into the mind of man to conceive.

What takes place in some cases of nervous disorder, seems to be comparable to what happens with a Leyden jar. A great difference certainly exists between a jar charged, and one not charged, as I have more than once demonstrated to my personal discomfort. The difference, however, is dynamical, according to our present knowledge. That which leaves the jar is a force, electricity. The eye or the microscope will not reveal any changes of structure. Sudden fright or shock may cause serious disease, or even death; and, on the other hand, severe disorders may be checked by a violent emotion. After long continued mental exertion, an individual may be temporarily unfit for willing, thinking, or doing. Pathologists have been unable to discover lesions in many cases of insanity. Something leaves the body, or something takes place within it; but the changes which occur are either purely dynamical, or only sub-sensibly material.

Latter-day psychology is a study in dynamics. Mental action is dependent on nervous structure. From nerve cells or molecules springs force; but this process is not an act of spontaneous generation. The nervous centres can give out only what they have taken in. They cannot, by some occult power, manufacture something out of nothing. They obtain from the blood that material which best answers their purposes; and with it they transform matter and force upward. Thought, which is the highest kind of vital manifestation, in its active form is the dynamic energy of nerve cell; and in its latent form, it is the potential energy of the same. Hence, mental acts and aberrations are phases of force.

Abundant illustrations of physical, and what might perhaps be termed vito-pathological correlations, might be readily furnished. When the electrodes of a battery are placed upon the brow, or one upon each temple, and flashes of light are seen, have we not an example of the conversion of electricity into nerve-force, and of the latter into light? The phenomenon might certainly, without any straining of reasoning, be so understood. Sensations of sound and taste, produced in an analogous manner, migh be similarly explained; as might also the effec known as photopsia or phosphenes, a perception of light present in some cerebral and ocular diseases, or caused by pressure on the eyeball In a recent editorial on the "Nature of Nerve Force," in the MEDICAL AND SURGICAL REPORTER the editor of which journal shows a constant and enlightened interest in the broad and fundamental problems of pathology, I find a con-

densation of some matters bearing upon this portion of our subject, which points, if proved, he writer suggests, will at once bring nerve-force into the category of forms of motion. He refers to the hero of one of Jean Paul Richter's novels, who always had around his head a luminous appearance, somewhat like the aureole or nimbus of old painters; and he quotes rom Brown-Sequard, who speaks of animals that are phosphorescent under their wills, and the influence of the nervous system, and who refers to cases of consumption, mentioned by Marsh, in which light has come from the lungs.

In the study of fevers, clear dynamic conceptions are highly useful. Many say that the essential pathological condition of fevers is seated in the blood; but good authorities admit that the correctness of this view is not demonstrable. Whatever may be the truth, it cannot be doubted that the term "blood-poison," so frequently employed in the discussion of febrile affections, is often simply a convenience, like the word "marasmus" in the case of a baby who has died of some obscure disorder. The fact that a morbid material in the blood is not necessary to account for the symptoms of the essential fevers, is sufficient to throw grave doubt upon the hypothesis of blood-poisoning. Prof. H. C. Wood, and others, have shown that the direct application of heat to the body, and to the brain, will give rise to violent fever; and here the first impression is upon the nervous system. The phenomena of incubation prove but little either way. The gradual development of some fevers suggests the gradual lowering of molecular activities within the body, a process which does not, necessarily, at least, involve the presence of a poison in the blood. After this lowering process has passed a certain line, the tension of the nervous system is overcome, the disease is fully formed.

The phenomenon of *latency* in febrile and other affections, is of interest from the standpoints we are endeavoring to take. The physicist speaks of latent heat; the medical man of latent typhoid fever. Disease is latent in the same sense that heat is latent. It was formerly supposed that latent heat represented a certain amount of an imponderable fluid which hid itself among the interstices of the substance heated; now, it is known that it means merely a certain amount of interior work or molecular motion. Disease, like heat, may be latent in this way. Instead of the ordinary sensible manifestations of disease, interior molecular vibrations are set up, which either are so general, as by dissipation to reduce the total effect, or by accumulation upon some organ or tissue, produce results more dire than if the disease had continued to be strongly manifested externally.

An understanding of the true doctrines of force and motion, must lead to a more rational therapeutics, to methods of treatment founded upon basic scientific principles. Bearing in mind the truths of conservation and correlation, the practitioner of medicine will address himself to the task of restoring the normal equilibrium of the body's forces. He will discover a new significance in such remarkable reciprocal relations as those which exist between pulse, respiration, and temperature. He will see more clearly that in many cases the ensemble of symptoms essentially constitutes the disease. He will not so frequently resort, at least not with the same objects as in days gone by, to vomiting, purging, bleeding, or other similar procedure. He will learn—indeed, he has already learned—to lay less stress upon the destruction of so-called blood-poisons, and the elimination of imaginary morbid materials from the system.

Success in treatment will often depend on the ability of the physician to mentally solve the problem of the relation of food and medicine to work and waste. In disease, some portion of the machinery of the body is too actively employed, or is not doing its full duty. It has been calculated that the work due to animal heat would lift the body through a vertical height of six miles per day; and an additional amount of work equivalent to the body lifted through nearly one mile per day, is spent in maintaining its temperature at fever heat. In a disease like Asiatic cholera, the phenomena of work and of animal heat are the opposite of those noticeable in fevers. Waste is proportional to work, tear to wear. From considerations of this nature, we recognize at once the importance in fevers, of a treatment directed to the reduction of temperature, and the retarding of tissue metamorphoses; and the equal importance in other affections of an exactly opposite procedure.

Under the influence of recent dynamical doctrines, new ideas in regard to inflammation and its treatment already largely prevail. We know that textural excitement precedes inflammatory hyperæmia. Effects which are spoken

of as directly dependent upon inflammatory action, are sometimes several removes from a first cause; inflammation itself being a secondary state, often merely an intermediate condition of expiation—a sort of pathological purgatory. In the establishment of inflammation, the walls of the blood-vessels first become more or less deprived of their vital endowments—of their vital force. Lister found from his experiments that the visible evidence of diminished functional activity accompanied, if it did not precede, the earlier approaches to inflammatory congestion. Carbonic acid will paralyze the vital energies of tissues, and thus give rise to intense but transient congestion.

Curiously enough at first sight, perhaps, but not so strangely in the light of the underlying principles of matter and force, does the fact appear that we sometimes have the most success in treating certain inflammations with remedies which are rather stimulant and tonic, than depressent, or "antiphlogistic," in character. Increased morbid local action is often dependent upon diminished general vitality. According to the healthfulness of a body, will be its resisting and repressent powers. Milk punch and quinine are highly efficacious in certain inflammatory affections of the throat, because the disorders are those of general depression.

I might, perhaps, generalize to a practical end by saying that the force which goes out from the body has often far more to do with the causation of disease, and should be taken much more into consideration in treatment, than the matter which enters the system. If the phenomena of radiant force were better understood, and more usually applied by physicians, some of the mysteries of disease would soon disappear. Heat is radiated from all bodies at all times. Thermal rays proceed from a substance until its temperature sinks to that of the surrounding medium. Frozen mercury, in a cavity of ice, will be melted by the heat from the ice. Different states of the atmosphere have different amounts of diathermancy, or the power of transmitting force as expressed in heat radiations. Taking cold is often dependent upon the fact that too much animal heat, that is, too much force, has been lost by radiation. With the aid of these principles of radiation, considering the total force or excitability of the system at any given moment as a fixed amount, we get perhaps a reasonable explanation of the remarkable results which flow from counter-irritation, and from allied instrumentalities, such as revulsives, purgatives, and blood-letting, local or general. They reduce, call off, or transmute energy. By means of a blister or rubefacient, the force which has been destructively concentrated on an internal and vital organ, is partially or wholly transferred to an external and less important part, whence it is, measurably, at least, dissipated into space. The true idea in venesection is not so much to exsanguinate and starve out, as it is to relieve vascular tension by counteracting or reducing a surplusage of force. I know not how to account for counter-irritants, like hypodermic injections, acting most serviceably over the seat of a disorder; unless by the fact that dynamical impressions travel in right lines.

I hope that nothing which I have said will be interpreted as an argument against the usefulness of pathological distinctions. The establishment and corroboration of differences among diseases and dyscrasia are of the utmost value; but the great principle of unity in diversity should always be kept in view. Light is not electricity, gravitation is not heat, yet these, and all physical forces, have a nature in common. They differ in manifestation and direct causation. In my somewhat fragmentary remarks this evening, gentlemen, I have tried to make prominent the thought that in pathology similar truths hold good; that all the disorders to which our frail natures are liable are bound together by a fraternal chain, forged from the doctrines of energy. Physicians as a class, like the English as a people, are strongly conservative; but certainly no good reason can be assigned why, in the study of disease, they should not give to dynamical ideas that higher consideration, which they are at present everywhere else obtaining.

The revived attention which is being paid to the nervous system, and its part in disease, is an encouraging sign of the times. These problems are not, by any means, purely questions of to-day. Fragments of the modern doctrine of force and motion may be found cropping out here and there in Hoffman's theory of nervous influence; in Erasmus Darwin's idea of association; in the Cullenian view of motions regulated by a living principle; in the Brunonian hypothesis of excitability or incitability, and in other medical teachings and systems of both earlier and later date. My remarks are not intended to be in the especial interest of any particular

school of medical or scientific thought. We may be pure physicists or vitalists, believers in the protoplasm of Huxley or the bioplasm of Beale; with Newton we may have faith in divine interposition, or with Tyndall recognize only matter's inherent powers; with Agassiz look upon man as a special creation, or with Darwin consider him to be descended from the lowest forms of life, or even with Hæckel, regard him as the ultimate evolution of primordial mud. One thing, however, is certain—the nearer we come to applying pure physical laws to our conceptions, the clearer and better will be our knowledge of the truths of nature; whether those truths be exemplified in earth or air, in the organic or inorganic world, in health or in disease.

Some of my professional brethren decry investigations, such as those to which I have been calling attention, as useless theorizing. With dreadful reiteration, they talk of "facts," and the "logic of facts." Verily, gentlemen, I believe in facts and their logic. In books and fields, in hospital and clinic, by the bedside and in the laboratory we should aim to be fact-hunters and note-takers; in the highest meaning of the term, above all, to be "practical." In the best culture, however, facts and principles, theory and experiment, go hand in hand. Faraday, the greatest of experimentalists, was also one of the greatest of theorizers—of speculators, if you choose. It is not theory, but blind and obstinate adherence to a certain theory, or the elaboration of ideas from consciousness, instead of from observation and experiment, which should be avoided and condemned by our profession, or any other in which brain-work predominates. In place, however, of my weak words, let me, in conclusion, quote to you as bearing upon this point, the language of one whom you will all doubtless recognize as a master in medicine, Thomas King Chambers:—

"It is true that there are, and always have been, practitioners who declaim against theories altogether, who even boast that they can do without them, and think them useless, not considering that to express such scorn is as if we should be proud of not knowing what we do when we act, or what we say when we talk. To reason at all is to theorize; no one without theorizing can direct a method of cure to a sick person except at hap-hazard. As a matter of fact, none of these objectors ever do prescribe without theorizing about either the individual sufferer or the class to which they refer his sickness, though not always able to put their theory into words. In short, the want of a guiding principle to connect the loose facts of daily experience has at all times been felt.

"From this practical need have been bred the many systems of therapeutics stamping their mark from time to time on the history of our art. They have sprung from the brains of working men at the bedside, not from philosophers in their closets. Their adopters have not necessarily any strong faith in their truth or universal applicability; but the heart wearies for a chain to link together the scattered fragments of knowledge—a string for its pearls; it must have an idea on which to codify the laws of action."

NOTE.—In an article like the one here offered for consideration, which has been prepared in most part without direct consultation of authorities, it is somewhat difficult, without overdoing the matter, to give credit to all sources of information; but I will endeavor to append a full list of the works to the spirit and letter of which I may be more or less indebted: First, medical text-books, such as, "Trousseau's Clinical Medicine," "Holmes' System of Surgery," "Chambers' Renewal of Life," "Maudsley's Physiology and Pathology of the Mind," "H. C. Wood's Thermic Fever," and "Dunglison's History of Medicine." Second, special articles, such as "Le Conte's Correlation of Physical, Chemical and Vital Force," in the *American Journal of Sciences* for November, 1850; G. F. Barker's "Correlation of Vital and Physical Forces in Half-hours with Modern Scientists," New Haven, 1872; "A Series of Expositions," by Grove, Helmholtz, Mayer, Faraday, Liebig, and Carpenter, in "Youman's Correlation and Conservation of Forces," D. Appleton & Co., New York, 1865; and "Thoughts on the Nature and Origin of Force," by William B. Taylor, and an "Address on the Relation of Food to Work, and its Bearing on Medical Practice," by the Rev. Samuel Haughton, in the "Smithsonian Report" for 1870. Third, Portions of the well-known scientific writings of Tyndall, Huxley, Spencer, and Balfour Stewart.

HOSPITAL REPORTS.

BELLEVUE HOSPITAL.

SURGICAL SERVICE OF JAMES R. WOOD, M. D.,

Professor of Surgery, Bellevue Hospital Medical College, New York.

CASE I. A woman, aged about fifty, with shoulder dislocated. The lower end of humerus pointing outward, the upper end inward, a depression over the deltoid muscle, and the patient was unable either to place her hand upon the head or upon the opposite shoulder. The case was diagnosed a dislocation of the head of the humerus into the axilla. Patient placed upon

a mat upon the floor; an assistant placing the heel in the axilla, another made traction upon the humerus, while the professor manipulated the head of the humerus. After a very short time the head slipped into the socket, and the arm retained in place by means of bandages.

During the remarks of the Professor, he explained the various forms of dislocation of the shoulder, the muscles which are concerned in the movements of the shoulder. He showed various prepared specimens of dislocation, and explained the ancient methods of producing relaxation of the muscles. At present, this is produced by ether or chloroform, but in olden times it was produced by other means. He remembered the case of one old lady with a dislocated shoulder, whom his preceptor requested to lie on the floor, in order that the head might be introduced into the axilla. She repelled the proposition. The Doctor then suddenly jumped into bed with her. She fainted immediately, but before she recovered, her shoulder was in its proper place. In one case a pail of water was thrown into the face of a patient, and while the indignation of the sufferer was at its height, the muscles were relaxed and the shoulder easily reduced. The object should be to surprise the patient, take them while sleeping, while inactive, when the mind is not directed to the parts; in any way while the parts are relaxed.

Still there are other methods of producing this which were resorted to in olden times. One was by lifting the patient up by the arm, the weight of the body being sufficient to cause the arm to spring into place, and you may manipulate in many ways to reduce the dislocation. They used to use compound pullies—a very powerful instrument used for the purpose. There was extension and counter-extension. Tobacco decoction was introduced into the rectum, warm baths, and every means to reduce the rigidity of the muscles.

Case 2. A patient sent here for the purpose of having the leg amputated. He has had necrosis of the femur for over a year. The whole leg is in a bad condition, and the disease is gradually but surely extending up to the trochanter major. It commenced low down upon the thigh, near the lower end of the femur; now it reaches up the middle third of the thigh.

Amputations of the thigh are always serious. He was sorry to be able to say that about eighty per cent. of amputations in the upper third do not recover; the percentage of death increases as you approach the upper end of the femur. You can perform the operation with comparative safety at the lower third.

The operation which he preferred was that known as the lateral skin flap operation, when operating at the lower third of the thigh. The manner of performing it is by placing the thumb and middle finger on either side of the thigh as a guide, then with the heel of the knife on one side of the leg, draw across while cutting, thrust the blade through the limb, bring the knife out so that a proper flap will be made, thrust the knife through beneath the bone, and make another flap beneath, then saw off the bone. The operation in this case occupied exactly forty seconds. A proper skin flap was then made, the arteries ligated, and the wound dressed. In this case there were a good many sinuses issuing from the bone. They were cleansed with carbolic water, so that when the bandage was applied from the toes, no decomposed matter could be forced up into the system, causing septicæmia, etc.

One of the objections found by Dr. Wood to Esmarch's bandage, is that it carries pus with it. He had never had trouble in this way: He used a broad bandage instead of rubber cord. A great many surgeons, especially British surgeons, object to Esmarch's method because embolism may be produced by it, and be carried up into the arterial system, the heart, the brain, and produce terrible mischief. He had never had any of this trouble, and he has never heard of anybody that did! It does not take very long to do this operation. But it is well to do it as rapidly as you can. Still, if you cannot do it well by doing it rapidly, take two hours if necessary. When there is diseased tissue in the flap, it should be dissected away. This is a secondary operation, and these operations do a great deal better than primary operations.

Dr. Wood then, upon the amputated limb, performed various operations. The lateral flap operation, an amputation of the upper end of the tibia, of the lower part of the leg, etc. He never uses a retractor, and never uses a knife or saw twice. Instruments should always be well cleaned before using again.

The leg which was amputated, when examined, exhibited fatty degeneration and hypertrophy of the bone, and a diseased condition generally.

Medical Societies.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

W. S. W. RUSCHENBERGER, M.D., IN THE CHAIR.

Wednesday evening, May 6th, 1874.

The following case of

Adenoid (Hodgkin's) Disease,

Was read by James H. Hutchinson M.D., Physician to the Pennsylvania Hospital.

W. M. L., æt. 19, a native of Vermont, unmarried, and a news agent by occupation, was admitted into the medical wards of the Pennsylvania Hospital, January 26th, 1874. He did not come under my care until February 1, when the following notes of his case were made by my clinical clerk, Dr George S. Gerhard.

"The patient's mother died of phthisis after having suffered for many years from enlargement of the cervical glands, but with this exception there seems to be no tendency to here-

ditary disease in his family. He has always been temperate in his habits, and has never had any form of venereal disease, or any serious illness before the present one began, about six weeks before his admission. At that time he complained of a feeling of soreness in the front of the chest, and in the muscles of the shoulders and arms. He did not, however, have actual pain until several days subsequently, when he became aware of the sensation of constriction at the base of the thorax. He also observed that his lower extremities were weak and numb. This symptom increased in severity until he was unable to walk except with assistance. The day prior to his admission he became absolutely paraplegic, and lost control over his bladder and rectum. He has never had any dorsal pain or any pain in the extremities, but has occasionally suffered from twitchings of the muscles. Upon inquiry it is discovered that he had at one time (some years ago) enlargement of the glands on the left side of his neck, but the enlargement of those on the right side, which is now apparent, was not observed until May last. Soon after his illness began he noticed a swelling over the upper bone of the sternum, which has gradually increased in size, until it is now as large as half an orange. It has been from the first tender to the touch.

"Upon examination the patient is found to have complete paralysis of motion and sensation of all the parts of his body below the thorax. The parts in which sensation is preserved can be sharply separated from those in which it is lost by dragging a pin along the surface of the abdomen where it is not felt at all. As soon, however, as the lower part of the thorax is reached, it is distinctly perceived. He complains also of a feeling of constriction about at the level of the line separating the sensitive from the paralyzed parts, but he has no pain or tenderness along the dorsal vertebræ. There are, moreover no contractions and no spasmodic twitchings of the muscles, but there is a notable increase of reflex movements. The palsied muscles respond fairly well to an induced current of moderate intensity, but feebly so to the galvanic. On the right side of the neck there is a mass of much enlarged glands, firm to the touch and not tender. Upon closer examination it is possible to trace the outlines of several glands which appear to be loosely bound together. At the inner part of the upper eyelid there is a tumor, due, probably, to an enlargement of a meibomian gland. In addition to this and to the tumor over the upper part of the sternum, already referred to, there are numerous tumors, varying in size from a millet seed to a walnut, distributed over the body, especially on the trunk. although the arms and legs are by no means free from them. They are, for the most part, situated beneath the skin, and are hard to the touch; a few, however, project as pedunculated appendages. The axillary and inguinal glands are slightly enlarged, but free from tenderness. No enlarged glands or tumor of any kind can be felt within the abdominal cavity. Neither the spleen nor the liver is enlarged. The patient is very pale and emaciated; his tongue is slightly furred, his appetite is poor, and the nails of his fingers have a decidedly bluish color. The urine contains an excess of the phosphates, but no albumen. Its specific gravity is 1020. His blood, upon being examined microscopically, is found to contain a slight excess of white cells. No disease of his lungs can be detected, but it is impossible to make a satisfactory examination of them in consequence of the pain he suffers when moved. The heart is healthy."

Feb. 20. "The patient has become very anæmic and more emaciated than when the last note was made. The paralyzed muscles are wasting, but reflex movements can still be excited in them. The small tumors beneath the skin of the trunk, arms, and legs, have increased in size, and this is also true of the large one over the sternum, but it is less tender to the touch than before. A few small nodules can be felt beneath the skin of the face; in fact there is no part of the body where some cannot be detected upon close examination. They are, however, less numerous on the posterior aspect of the body than in front. The feeling of constriction around the body at the base of the thorax still continues, and gives rise to much suffering. The pain is much increased upon movement. A bed-sore has formed over the sacrum in spite of every precaution to prevent it."

The notes after this, although taken almost daily, merely show that the disease progressed from bad to worse until death released our patient from his sufferings on May 4th, 1874, or very nearly five months after the manifestation of the first serious symptoms, and a year after the enlargement of the cervical glands was first perceived.

The autopsy was made eighteen hours after death. The body was much emaciated. Rigor mortis well marked. Bed-sores existed over the sacrum and the right shoulder blade. A very large number of tumors, varying in size, were observed, scattered over the whole surface of the body, being found on the head as well as on the trunk and extremities. A few of these, not more than three or four, were pedunculated and took their origin in the true skin; the remainder were more deeply seated, being situated between the skin and superficial fascia. At the inner part of the left upper eyelid was a lobulated tumor of the size of a hazelnut. The cervical glands of the right side were enlarged, forming a tumor equal in size to a small orange. Over the upper third of the sternum, and extending to the notch above and to the cartilages of the ribs on the sides, was the largest tumor in the body, measuring from three and one-half to four inches in diameter, and raised above the surface at least one and one-half inches. It was found to penetrate the bone, and was nearly of the same dimensions beneath the sternum as above it. The venous and arterial trunks of

the neck were in contact with it in the anterior mediastinum. The other tumors, which varied in size from a small pea to half a walnut, were distributed over the body as follows: On face, twenty-four; on front of chest, seventy; on front of abdomen, sixteen; on back, twelve; on right arm, eighteen; on right leg, thirty-three; on left arm, forty-three; on left leg, twenty-three; making in all two hundred and thirty-nine.

Head.—The skullcap was moderately thin. The membranes were not congested, and presented, in every respect, a normal appearance. There was no effusion. Twenty tumors, the largest the size of a small filbert, the smallest that of a grain of wheat, were counted scattered over the surface of the brain. The largest were distributed as follows: Anterior lobes, upper surface, right side, three; left, one; lower surface, right side, two; left, one; middle lobe, base, right side, one; left, two; cerebellum, on under surface of right lobe, one; on upper surface of left lobe, one. The smaller tumors were seated in the upper and lateral surfaces of the right posterior lobe of the brain. They so closely resembled the brain-substance in appearance that they would have escaped notice if they had not been specially looked for.

Spinal Column.—On opening the chest and removing the thoracic viscera, a tumor was found completely surrounding the bodies of the sixth, seventh, and eighth dorsal vertebræ, and continuous with this through the intercostal spaces were similar growths occupying the gutters on both sides of the spinous processes, but causing little or no projection posteriorly. The spinous and transverse processes of the vertebræ just mentioned were so soft that they could be readily cut with a scalpel. Upon removing them the tumor was seen to have penetrated into the spinal canal, where it was adherent to the dura mater. It compressed the spinal cord, which in this position was less firm than elsewhere. A similar, but much smaller, tumor was found within the canal at the level of the last dorsal vertebra.

Chest.—The pleuræ were healthy. There was no effusion into either of the pleural sacs. The lungs contained a large number (as many as three hundred were actually counted) of tumors, similar in appearance to those in other parts of the body. Their average size was about that of a large pea, but a few were considerably larger than this. They were seated immediately beneath the surface of the lungs as well as in their interior, which in other respects presented a healthy appearance. But one tumor was detected, taking its origin from the parietal pleura, and that one was situated on that part of it in contact with the pericardial sac. The pericardium was smooth; no tumors existed either on its parietal or visceral layers. The sac contained about two ounces of clear straw-colored serum. The heart was normal in size and in consistence, but was pale in color. Its cavities contained both black and white clots, which extended into the great vessels. The valves were healthy.

Abdomen.—There was no trace of peritonitis, and no effusion into the peritoneal sac. Small tumors, about the size of a grain of Indian corn, were scattered over the peritoneal covering of the intestine. The mesenteric glands were much enlarged and prominent, but no other glands within the abdominal cavity were diseased. The omentum was entirely free from fat. The rectum was distended and filled with light-yellow colored fecal matter. The liver was normal in size, color and consistence, being entirely free from tumors, either on its surface, in the connective tissue of the fissure, or in its substance. The gall-bladder contained green-colored bile. The spleen was not enlarged, and presented an absolutely healthy appearance. The supra-renal capsules were enlarged; the left one contained a grandular growth. The kidneys were normal in size; their tissue was firm and dense. On the surface of one of them was found a small growth pressing into the substance of the organ. The connective tissue surrounding the kidneys held in its meshes numerous similar tumors. The capsules were easily removed, leaving a smooth surface, which, however, showed a slight tendency to lobular depression or contraction. The pelves and ureters were filled with a gritty sabulous deposit from the urine. The walls of the bladder were thickened; its mucous membrane was rough, and in places covered with calcareous matter; in other places it was discolored by ecchymoses. The urine contained in the viscus was bloody.

Bones.—A small piece of the left femur, about its middle, was removed, for the purpose of examining its medullary cavity. This was filled with a yellowish-green gelatinous substance. The body having been necessarily much mutilated by the examination, it was deemed unnecessary to remove the enlarged cervical glands, or the tumor of the eyelid.

There is the same difficulty in discovering the cause of the disease in this case, as in almost every other reported case. Virchow believes that the cervical enlargement, which generally ushers in the disease, is preceded in many cases by otorrhœa, and Jaccoud thinks with Mosler that it often may be traced to frequent attacks of pharyngitis; but while a few of the authors whose papers I have been able to consult refer to these opinions, none of them report cases which at all substantiate them. In my case there was a history neither of otorrhœa nor of pharyngitis, nor of anything else which would be likely to have a determining influence in the production of this disease. It is true that the patient's mother was affected for many years with enlargement of the cervical glands; but the fact that she died finally of phthisis seems to justify the conclusion that this was due to scrofula, rather than the disease under consideration. Moreover, among the fifty-eight cases I have collected, there is not one in which the reporter believes that hereditary influence had any share in the production of this disease. The reports of the case in the *Transactions* of the London Pathological Society are not always

very full, and it is, therefore, possible that I have been led into error by them, but I can find in only three cases a positive statement that a predisposition to either phthisis or tuberculosis existed; and in only seven did the post-mortem examination show the presence of either of these conditions, and in a few of these it is probable that these tumors were really lymphadenomata. This is a result different from what I had anticipated, for, believing as I do that tubercle is a minute lymphadenoma, I had expected to find in most of the cases a marked predisposition to tuberculosis.

[Dr. Hutchinson closed with an analysis of fifty-eight other cases of the disease and a bibliography of the subject.]

EDITORIAL DEPARTMENT.

PERISCOPE.

Non-Nitrogenous Diet in Chronic Rheumatism.

As an example of this plan the following case is cited, as given in the *Lancet* by Dr. E. L. Mass:—

At first sight it might be assumed that a diet of oil, starch, and sugar, would, by the lactic fermentation of the two latter, exaggerate a disease known to be associated with an increase of lactates. But lactic fermentation depends for its origin on the katalytic action of decomposing nitrogenous substances, such as may occur in the imperfect digestion of ordinary food. Therefore, if rheumatism, like scurvy, could be cured by diet, the non-nitrogenous plan is rational enough. My reason for trying it, as stated above, was, however, quite independent of any such chemical theorizing. I may at once say that the diet did not cure the rheumatism, though it permanently removed some of the accompanying symptoms; nevertheless the results are noticable as confirming those mentioned above, especially as the diet was persevered in for a longer period than in any cases I have seen recorded.

The following may be taken as an index of the patient's condition during the week previous to the commencement of the treatment: Average axillary temperature, 99.4°; pulse (lying) 92, weight 129 pounds; digestion slow and imperfect, accompanied by feeling of distention and acid eructations. Bowels irregular, diarrhœa and constipation alternating. Total quantity of urine in twenty-four hours, 38oz.: its specific gravity 1016; and free acidity, expressed according to Vogel's plan in grammes of oxalic acid, 1017. This amount of acidity was so much greater than I expected to find, that I at first attributed it to such acid fermentation as might take place in various portions passed within the twenty-four hours, but estimations made immediately after micturition gave a very similar result. The normal free acidity, according to A. Winter, is equal to 2.3 grammes oxalic acid.

The diet adopted was that given by Dr. Parkes, with the addition of tapioca pudding, without milk or eggs. It consisted of arrow root cakes made with butter, melted and poured off from its curds. Some cakes were made with sugar, some without, and arrowroot porridge with treacle. After a trial of three days the man complained of the monotony of this regimen, and a glass of weak gin-and-water was added to the scale, as I could not be certain of his strict adherence to it, if he was dissatisfied, and the addition, though unlikely to aid the reduction of acidity, would not interfere with the character of the diet.

After careful adherence to non-nitrogenous and non-saline diet for seven days, his axillary temperature, mean of morning and evening observation—was 99°; pulse, 79; weight, 125 pounds. Total quantity of urine, 40 oz., spicific gravity, 1009; it was still acid, but after four careful estimations its free acidity was found to be reduced to equal to 1.77 grammes of oxalic acid. If Haughton's tables can be trusted under such abnormal diet, the daily quantity of urea was reduced by 86 grains.

The case progressed to recovery.

The Management of Apoplexy and Paralysis.

Dr. Bastian, in a recent number of the *Lancet*, advises as follows:—

You cannot keep your patient too quiet in mind and body. You must keep him cool, see that his head and shoulders are well raised, give him nothing but light and easily digestible food, whilst at the same time you may endeavor to calm any undue excitement about the heart's action by the administration of bromide of potassium or of aconite. When hemorrhage is threatened, moreover, you must always administer purgatives or emetics with the utmost caution, and by no means resort to them as routine measures. Keep well before your mind the risk which may be entailed by an indefinite amount of muscular straining, in the act of vomiting, for instance, so that you may not resort to such measures except in the face of a strong necessity for emptying an overloaded stomach.

Our treatment of the apoplectic condition itself is now wholly different from what it was

in the last generation, when our predecessors bled their patients again and again, and were by no means sparing in their use of blisters and of drastic purgatives. The teachings of the late Dr. Todd, of Trousseau, and many others, on this subject, have fortunately been very widely received and adopted, so that it is now almost needless for me to say anything against a method of treatment which, however firmly established it may have been at one time, is now almost wholly discontinued. We have happily learned to recognize the inutility of, and also to fear the risks attendant upon, this routine method of bleeding and of active interference generally, so that we are content to trust more to nature or to the natural course of events, and to subordinate our own direct efforts at curing or cutting short the comatose condition.

Still, much may be done by watchful care and attention. Should there be much heat of head, with violent throbbing of vessels, you may apply ice in a bag, or evaporating lotions, whilst your patient lies in a cool airy room, with head and shoulders raised, and everything loose about the neck. At the same time you may wrap the feet up in flannels, and apply hot bottles to them. Should your patient be able to swallow pretty easily, you may attempt to tone down an excessive force and frequency of the heart's action by moderate doses of bromide of potassium combined with tincture of aconite. But where the pulse is very rapid and irregular, without undue force, it will be most prudent to abstain from the administration of drugs. On the other hand, where the breathing is very slow, and the pulse flickering and weak, whilst the patient's face is cold and clammy, you must have recourse to a very cautious administration of stimulants.

Should an epileptoid condition supervene, in which there are rapidly recurring convulsive attacks, these should be met by rather large doses of bromide of potassium, and the same remedy in smaller doses is often very useful where there is a restless condition with more or less delirious wandering. In very many cases, however, no drugs will be required during this stage. The patient's condition must be carefully watched, and if it seems desirable to unload the bowels this may be often best accomplished by means of an enema. The state of the bladder must also be looked to, and the urine drawn off by a catheter if necessary.

For many days after the condition of unconsciousness has wholly or partially passed away the patient must still be kept as quiet as possible in body and mind, and this rule more especially holds good where there is reason to believe that hemorrhage has occurred. The diet and secretions must be carefully regulated, and in those exceptional cases in which there is very great difficulty in deglutition, the most prudent course for a time may be to feed the patient by means of a tube (to which a small funnel can be attached) passed through one nostril, and down as far as the commencement of the œsophagus. We may thus better secure rest for the damaged nerve-centres, and so contribute towards the patient's earlier recovery. And similarly where there is very great difficulty in articulation the patient should for a time be kept absolutely quiet, and not allowed to attempt to speak. A little later on, when there is less danger of inducing irritation at the seat of injury, the patient must be encouraged to swallow properly prepared food, and he must also be encouraged in his attempts to repeat or utter simple words.

On Urohematuria.

A paper on this subject, by Dr. J. K. Spender, is epitomized in the *British Medical Journal*. The author related how a perfectly pale, almost colorless, urine might be the unsuspected vehicle of blood, robbing the body to a not less certain and damaging extent than if it displayed itself as ordinary blood in the usual way. Exhibiting no danger-signals to either doctor or patient, this treacherous and seemingly innocent urine might contain every element of destruction, and might represent wear and waste of a most fatal kind. The knowledge of this clinical condition was due to the sagacity of Dr. George Harley, who described it more than ten years ago. It frequently accompanied chlorosis, and could be demonstrated in the following way. The specific gravity was seldom below the standard, but if to a sample of the urine (which might contain no sugar or albumen) strong hydrochloric acid were added, a port-wine tint would be rapidly assumed, showing that there was an excess of combined urohæmatine, which was liberated by the acid. Consequently, there might be an immense destruction of blood-corpuscles in the body, and their *débris* be so eliminated as to be invisible until the application of an acid set it free. In these cases, the urine never contained blood-corpuscles. It was always alarming when the liberal administration of iron did not alter the urine, or hinder the excretion of metamorphosed blood; but Dr. Spender had found Dr. Harley's description literally true in so many cases during the last ten years, that he thought it might be an advantage to bring the matter under the notice of his medical friends.

On Membranous Dysmenorrhœa.

At a meeting of the London Obstetrical Society, in December, Dr. George Hoggan read a paper on the "Nature, Cause, and Treatment of Membranous Dysmenorrhea," illustrated by diagrams and microscopic specimens. The specimen was formed of two different structures, continuous with each other, one from the vagina, consisting of the well-known pavement cells of the part, the other from the uterus, and formed of embryonic tissue in its early stage, and identical with the structure of the decidua. This rare specimen explained the diverse views on the subject; one school holding that it was an exfoliation, and the other that it was an exudation, the fact being that different observers

had examined different ends, and therefore structures, of the same membrane. From the symptoms of the case, the membrane seemed due to inflammation. To the naked eye and under the microscope the vaginal portion resembled such products of inflammation as the skin of a blister or the membranous cast of the urethra thrown off in urethritis. The conclusion, therefore, was that the uterine portion continuous and contemporaneous with it was also due to inflammation; but *vice versâ*, the uterine portion which was identical with the decidua was probably due to the same cause, *i.e.*, excessive vital stimulation, and the vaginal portion continuous with it likewise. It was therefore reasoned that inflammation and excessive vital stimulation were the same thing, the latter expression being now offered as a new and correct definition of inflammation. The rational treatment he had employed with success was to lower generative action by anaphrodisiacs, as the bromide of potassium, in large doses, prior to the commencement of the period.

Dysmenorrhœa.

Some useful clinical remarks by Dr. Peter, of the Hospital St. Antoine, of Paris, are given in the *Lancet*. The case was of a sister, aged 19, a severe sufferer from painful menstruation. Notwithstanding the disappearance of the inflammatory symptoms, Dr. Peter caused the patient to remain eight days longer in bed, as he was convinced that rest was indispensable for a complete recovery, and that premature movements communicated to the internal genital organs, when congested, might cause a recurrence of the inflammation.

Thus, in this case, local and physiological congestion had passed into inflammation, which, in turn, threatened to extend from the utero-ovarian peritoneum to the whole peritoneal tract. Dr. Peter lays stress on the uselessness of the blister and the effectiveness of the scarificator, and remarks that if he did not use depletion immediately, it was because in France, and especially in Paris, medical men are prevented from doing so by a fashionable prejudice which he calls "the spectre of anæmia." Through a wild terror of this spectre," he says, "we allow inflammation to go on and become formidable, for want of abstracting a few drops of blood; and certainly, in this case, few physicians would have consented to an application of the scarificator at the beginning of the disease, and the same would have been accepted only, perhaps, when the increasing gravity of the symptoms would have called for urgent measures." Besides the efficacy of the bloodletting, Dr. Peter called attention, in connection with this case, to other points which should also be mentioned, namely, the diagnostic value of pain in the lower part of the back, and the advisability, for diagnostic purposes, of exploring the abdomen with only one finger. "In uterine affections, especially," he said, "we can thus localize the evil with the greatest precision, and in cases of puerperal affection it is of the highest importance to do so, for it is then necessary to make out whether the uterus and its appendages are the primary seat of the mischief, whether the pelvic peritoneum is involved in consequence, whether itself alone or the whole peritoneum is involved; and upon this important diagnosis, which can be made with only one finger, depend both prognosis and treatment."

Reviews and Book Notices.

NOTES ON CURRENT MEDICAL LITERATURE.

——The Report of the Pennsylvania State Hospital for the Insane, Danville, Pa., indicates that institution in a flourishing condition. During the year previous to September, 1874, there was an average of 238 patients, somewhat overtaxing the capacities of the building.

——The "Physician's Monitor," for 1874, contains a variety of information, principally commercial, of interest to physicians and dealers. Published by W. A. Townsend, New York.

——The 19th Annual Report upon the Births, Marriages and Deaths, in the city of Providence, in 1873, appears under the efficient superintendence of Dr. Edwin M. Snow.

——We also acknowledge:—

Fractures of the Patella, pp. 8; by R. E. Beach, M.D.

Palato-plasty; by David Prince, M.D.

Annual Report of the Academy of Natural Sciences, Philadelphia.

Annual Report of the Pennsylvania Institution for the Instruction of the Blind.

BOOK NOTICES.

Transactions of the American Otological Society. 8vo. pp. 135. With Preface and Index to vol. I. 1868–1874. Boston: James Campbell. 1875.

It would seem as if there was to be a change also in colors in Medical Periodicals, as we have a change in representatives in Congress, the gray being adopted in New England instead of the blue. The Boston *Medical and Surgical Journal* donned the gray in the New Year, and we find the Otological following their example. Pleasantry aside, we are glad to see the volume of the Transactions completed, and always wel-

come the advent of each number, and we hope the society will long flourish and bring forth fruit to the credit of otology in the United States. It may be well for a veteran in this department to state, in passing, that it is not a very remunerative department of medical practice, except to the quack, but its study involves a great variety of scientific topics, and is of much interest to a true philosophic mind. The meeting, in point of numbers, was smaller than usual; only twelve members present. There were two new members elected, and one resignation. The Vice President, Dr. C. J. Blake, of Boston, acted as President. The former officers were re-elected. Dr. Burnett, of Philadelphia, and Blake, of Boston, presented a very satisfactory report on "The Progress of Otology," being divided into three parts. 1. Anatomy and Physiology, by Dr. Burnett. This is a careful report on the scientific progress, and a large amount of attention is given to the subject of the relation existing between the semicircular canals and the equilibrium of the body, and their functions in the labyrinth, and their importance in hearing. Pathology and Therapeutics of the Ear, by Dr. Blake. Book reviews and notices, by each member. As our space is limited, we shall devote it chiefly to pathology and therapeutics, which are always the most acceptable to the busy physician. "Dr. Phillimore, in a series of remarks upon the occurrence of hœmatoma, observes that he has never found this disease unaccompanied by disease of the brain or its membranes, and furthermore, with regard to its location in the auricle, that in none of the cases under his observation has the tumor included the posterior surface of the pinna or the lobule." p. 490.

We differ in opinion from the gentleman, and in our investigations and observations there has been in almost every instance violence, which has been the producing cause, and not simply the brain disease. Drs. Yeats and Needham* have reported cases to show that even when co-existing with pronounced insanity, it is not so unfavorable a symptom as had been supposed. Dr. Farquharson, of Rugby, has observed a similar condition of the auricle, in boys, after football. At p. 492 is reported, at length, a rare and interesting case of pneumatocele cranii, by Professor Wernher, of Giessen, in a man of twenty years; following an attack of sneezing, a tumor about the size of a pigeon's egg appeared behind the right ear, upon the upper portion of the mastoid process; this gradually enlarged until it presented an enormous swelling. The treatment consisted in the continued application of an elastic bandage, which so far diminished the tumor, that a further examination of the underlying bone could be made, and this examination revealed an opening in the superior portion of the mastoid, through which air made its way from the middle ear. The active treatment was directed to the closure of this opening, which was done by including by pressure this portion of the tumor and injecting iodine. Other portions were subsequently treated in the same way, and twenty-five days later the patient was discharged with the tumor entirely gone and the integument everywhere in close contact with the cranium. Very little pain or irritation followed the use of the iodine.

Dr. J. Orne Green reports* a similar case to the above, and from the same authority. The patient in this report is stated to be a young woman, aged twenty, and recovered under the same treatment.

Wernher closes his article with a review of eleven cases of the disease already described.

Z. Taufal published an extended report of thirteen cases of traumatic injury of the membrana tympani, and the majority of them were found in the anterior half; this agrees with the observations of Dr. Shaw, of Boston, and Prof. Gruber, of Vienna. In this article Dr. Lea Bail is referred to, and we cannot close without giving his conclusions from his valuable monograph on the semeiological value of traumatic otorrhagia and serum from the ear (always considered a fatal symptom in old times).

1. "That a discharge of blood from the ear, after an injury of the head, is characteristic of no one disease, and is, in itself, absolutely of no diagnostic value.

2. "Such a discharge is common to several lesions of the ear, arising from different causes viz:—

a. Wounds of the external auditory canal, which frequently result from injury to the face or lower jaw; in these cases, the history of the injury, the condition of the inferior maxillary articulation, the condition of the membrana tympani and the tympanic cavity serve to guide the surgeon to an accurate diagnosis.

* *British Medical Journal*, July and August, 1873.

* *Boston Medical and Surgical Journal*, p. 489, Nov. 19th, 1874.

b. Injuries of the membrana tympani and the mucous membrane of the tympanum, which frequently accompany injuries of the head, and may be the result of either direct or indirect violence; in these cases the progress of the symptoms enables us to decide on the seat of injury. An injury of the drum-membrane or tympanum does not cause the serious train of symptoms which a fracture of the petrous bone does.

c. Fracture of the petrous bone, in which the duration, intermittence and repetition of the bleeding are of great diagnostic value in distinguishing the injury from a simple laceration of the middle ear, for in the latter case the bleeding soon ceases, and does not return.

In this, the second review of Dr. Roosa's Treatise on Diseases of the Ear, at p. 526, second and third paragraph, Dr. Blake makes the following just criticism. "Under the head of the nasal douche the author expresses his views against its use, since he has found it to be sometimes a troublesome and dangerous appliance."

"This surely will be the case if the instrument is improperly used; but if the fluid injected into the nares *be warm, if the vessel containing the fluid be not higher than the patient's forehead, and if after using the douche the patient do not leave his room for at least fifteen minutes, we have yet to hear of any accident such as Dr. Roosa depicts.*" The italics are Dr. Blake's. Then follows a number of interesting papers by various members of the society.

Dr. Oren D. Pomeroy reports nine cases of Tenotomy of the Tensor Tympani Muscle (not tendon), done posteriorly to the malleus handle, by Gruber's instrument, and that Prof. Gruber's statement has been verified by the cases under consideration. In several of the tenotomies it appears to him that they could not have been done at all had the old method been attempted; this we have not found as yet, for even when the membrane was actually invisible in front of the processus brevis, owing to the very narrow meatus, knowing its position, we have operated without sight, and succeeded in cutting the tendon by Weber-Liel's instrument, which is much smaller and more delicate than Prof. Gruber's.

Dr. Pomeroy states that in *two or more* (the italics are ours) it was impossible to determine whether or not the tendon was divided. In the first case the "tinnitus diminished about one half." Second case. "Tinnitus was a little worse after the operation." Third case. "Tinnitus disappeared wholly, and has not returned." Fourth case. "Tinnitus much diminished." Fifth case. Tinnitus somewhat diminished. "In attempting the incision, the pointed instrument struck a portion of the membrane exactly behind the short process, and refused to enter, apparently touching a hard substance, probably the malleo-incudal articulation." Sixth case, "A somewhat violent suppuration resulted from the attempt to puncture, with bleeding, from the division of the artery which supplies the muscle; no good results followed. Seventh case. "Four days after tinnitus nearly gone; hearing distance as before. In this case employed tenotomy by Dr. Green's instrument, and the conclusions he arrived at in regard to the modification, that its rounded end made it necessary to puncture the membrane with a needle as a preliminary step in the operation, and if used alone, would require a little extra force (a dangerous thing to use), and its superior delicacy of construction offered real advantages." Eighth case. "There was considerable hemorrhage, and the operation was somewhat painful. Not benefited." Ninth case. The tinnitus is somewhat relieved." It will be interesting in this connection to state that Weber-Liel* gives, in the *Berliner Klinische Wochenschrift*, for September 21st, the results of his further experience of the operation. "He says that he is convinced that many cases of progressive deafness, accompanied by tinnitus, are only to be benefited by this tenotomy, but warns the surgeon that it is not to be looked upon as a remedy against certain diseased processes, but against certain conditions common to different forms of ear affection, viz., increased tympanic tension and heightened intralabyrinthine pressure. From two hundred and twenty-five operations he concludes that tenotomy of the tensor tympani may, where every other means has been found useless, relieve vertigo, abolish or greatly reduce tinnitus, and improve the power of hearing; but relapses in old standing cases are not uncommon, on account of the other secondary changes which have occurred in the middle or internal ears. Where the operation was looked upon merely as a step to further treatment of the tube and cavity, the relapses were much more seldom, and it is in this light that Weber-Liel wishes it to be considered." L. T.

* *London Medical Record*, December 12th, 1874.

MEDICAL AND SURGICAL REPORTER.

PHILADELPHIA, FEB. 13, 1875.

D. G. BRINTON, M.D., Editor.

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TRANSMISSION BY DESCENT.

The theory of Evolution, including, of course, the evolutional psychology which has been rapidly gaining favor of late, is based upon the laws of hereditary transmission. The investigations of PROSPER LUCAS necessarily preceded the generalizations of CHARLES DARWIN. The latter stand or fall with the former. No branch of science, therefore, is just now the cynosure of so much interest as this relation of ancestry to posterity.

A singular discovery has recently been added to our knowledge of the subject by that indefatigable physiologist, Dr. C. E. BROWN-SEQUARD. Somebody, we forget whom, tried to throw ridicule on the laws of transmission, by assuming that a one-legged man ought, in accordance with these laws, to procreate one-legged children. It was, in the views of this objector, a sort of *reductio ad absurdum* of the whole theory. But now comes Dr. BROWN-SEQUARD, and though he does not say quite, that the one-legged family is to be expected, he does demonstrate, by a series of conclusive experiments on his favorite animals, guinea pigs, that injuries to the parents result in the production of children with analogous lesions, even to the extent that a young pig is born without toes, of parents whose toes had been removed artificially! Here are some of his conclusions concerning the hereditary transmission to many animals of morbid states caused in one or other of their parents by some injury to the nervous system:—

A change in the shape of the ear in animals born of parents in which such a change was the effect of a division of the cervical sympathetic nerve.

Partial closure of the eyelids in animals born of parents in which that state of the eyelids had been caused either by the section of the cervical sympathetic nerve or the removal of the superior cervical ganglion.

Exophthalmia in animals born of parents in which an injury to the restiform body had produced that protrusion of the eyeball.

Hematoma and dry gangrene of the ears in animals born of parents in which these ear-alterations had been caused by an injury to the restiform body near the nib of the calamus.

Absence of two toes out of the three of the hind leg, and sometimes of the three, in animals whose parents had eaten up their hind-leg toes, which had become anæsthetic from a section of the sciatic nerve alone, or of that nerve and also of the crural.

Appearance of various morbid states of the skin and hair of the neck and face in animals born of parents having had similar alterations in the same parts, as effects of an injury to the sciatic nerve.

In reference to these last cases, he states that we must conclude that the sciatic nerve in the congenitally toeless animal has inherited the power of passing through all the different morbid states which have occurred in one of its parents in the central end of the sciatic nerve from the time of the division till after its reunion with the peripheric end. It is not, therefore, simply the power of performing an action which is inherited, but the power of performing the whole of a series of actions, and in a certain order.

In almost all, if not in all, the cases of hereditary transmission, most likely what is transmitted is the morbid state of the nervous system. There is, therefore, an inheritance, not only of an aptitude of being seized with convulsions, etc., but of the whole nervous affection of the father or mother in all its features, from beginning to end, and in the same order.

This is certainly wonderful, and when we reflect how closely the moral is tied with the nervous system, how can we be surprised at the tendency to recurrence of nervous diseases, and those nervous states which imperiously demand stimulants or narcotics?

A remarkable example of a hereditary tendency to crime was recently read to the Charities Aid Association of New York City, by Dr. Harris. His attention having been called to a county in New York in which the proportion of crime and poverty to the entire population was extraordinarily great, there being about one criminal or pauper to every ten inhabitants, he set about investigating the cause of this state of affairs. He found that seventy years ago a child having no other name than Margaret was a vagrant about the locality. There was no almshouse, and the girl lived on the gifts of her neighbors, never being educated and never having a home. She gave birth to children, who became paupers like herself, and at the present time nine hundred descendants of the friendless woman can be traced. Of this progeny, two hundred are recorded as criminals, and a large number as idiots, lunatics and drunkards. In one generation there were twenty children, three of whom died young. Of the others, nine were sent to States prisons for aggregate terms of fifty years, and the rest were constant inmates of penitentiaries, jails and almshouses.

This criminal and pauper record is ascribed to hereditary disposition, but of course there were other and casual circumstances to aid it.

Looking at it as a physiological question, it would appear pretty clear that man is much less subject to the laws of physical change than are many of the lower animals. It is a noteworthy fact that the most expert archæologists believe that the very earliest race of men of whom we find relics in Western Europe, that race which lived in the pre-glacial epoch, when hippopotami bathed in the Scottish friths and lochs, and elephants roamed over Ben Lomond, belonged to the same race and lineage, and were just as skilled in the arts of peace and war as the Eskimo of Arctic America, who are their descendants. No delving in drifts and cave floors, no sifting of kitchen-middens and lacustrian silts, has come upon signs of man when he was not a fire-using, a tool-making, a clothes-wearing, a cooking, social animal, infinitely far, therefore, above the expertest of the anthropoids about him. Millions of years, if we concede him such antiquity, have not materially changed him.

Notes and Comments.

Therapeutic Notes.

ICE IN DIPHTHERIA.

This is no novelty in therapeutics, but it has lately been urged with new vigor by Dr. Meyer, in the *Jahrbuch für Kinder Krankheiten*. Even in children under one year he directs small pieces of ice to be put frequently into the mouth, followed, if possible, every minute or two by a teaspoonful of iced water. The ice must be pure, and therefore all artificially prepared is best. In severe cases the external use of cold, by means of an ice-bag applied round the throat, is very useful. The author has found that by this mode of treatment the fever soon diminishes, and the diphtheritic membrane is detached and expectorated. It is only in exceptional cases that the disease extends nevertheless to the larynx.

THE ARTICHOKE IN RHEUMATISM.

Dr. Copeman, in the *British Medical Journal*, recommends a tincture of the leaves of the artichoke, *cynara*, gathered while they are full of juice, just before the top of the vegetable is fit for food.

He says that in his experience no other medicine has appeared to be so efficacious in rheumatism as cynara, whether in the acute or the chronic stage. Dr. Copeman usually administers it in the following form:—

℞. Potassa bicarb.,	ʒj	
Aquæ camph. ad.,	ʒviij	
Tincture cynaræ,	ʒj	
Syrupi papaveris alb.,	ʒss.	M.

Two tablespoonfuls to be taken every four hours, with as much of the extract of cynara as would make two moderately sized pills. Lemonade is given to quench the thirst.

CHLORAL SUBCUTANEOUSLY IN ASTHMA.

The hypodermic injection of three grains of chloral, dissolved in twenty minims of water, will relieve in ten minutes a violent asthmatic spasm, according to Surgeon Major Baillie, R.N.

IODIDE OF POTASSIUM IN DIPHTHERIA.

A writer in the *British Medical Journal* says: In diphtheria, iodide of potassium is looked upon by many practitioners as the best remedy we possess. Here its alterative and sedative actions are laid aside, and we have it doing duty as an antidote to the diphtheritic poison; although, so far as can be seen, it exercises no new influence.

The Leprosy of the Bible.

In Cassell's "Bible Educator," for January, writing on the leprosy of Scripture, Dr. Greenhill is of opinion that the disease was "multiform and changeful," modified by various complications, and comprising several species more or less distinct; that some of these varieties were contagious, and others non-contagious, and that all the contagious species rendered the patients ceremonially unclean; that it was not a special or miraculous disease, existing only in those times and countries, but an ordinary malady, used occasionally by God for miraculous purposes; that it was not incurable by human means, though troublesome and obstinate; that it was not hereditary, though a disease of common occurrence among the Jews; that it was not the same as elephantiasis, though it is possible that this disease may occasionally have been complicated with it; that there is no evidence that any case of elephantiasis is mentioned under the name of leprosy, in any part of Holy Scripture; and that if the disease known as elephantiasis occurs at all in the Bible, it is probably in the case of Job.

On the Juice of the Carica Papaya.

This is a tropical growth, of the family of Cucurbitaceæ, reaching a height of fifteen feet, indigenous in India. The bark and fruit yield a milky juice when cut. This juice has a curious use. The natives sprinkle it on tough meat, which it renders comparatively tender and improved in flavor. Yet it has no dissolvent nor caustic effect when applied to the tongue. It seems a sort of vegetable pepsin, but acts much more promptly and energetically. A series of experiments on its action is detailed by Dr. G. C. Roy, in the *Journal de Medicine de Brusselles*, September, 1874, the continuation of which we shall look for with interest.

Bills Sent.

We enclosed last week quite a number of *Bills* to subscribers who are in arrears. We earnestly ask all who receive them to respond promptly. The expenses of conducting our publications are heavy, and must be paid in cash. Hence, our request for *payment in advance* is not unfair.

—We are requested by Professor Gross to state that the lithographic portrait to which reference was made in the Reporter, —— is considered by him unlike, and hence its sale has been stopped.

CORRESPONDENCE.

FOREIGN.

VIENNA, AUSTRIA, December 25th, 1874.

ED. MED. AND SURG. REPORTER:—

Having had nothing of special interest to call our attention from the every day routine of student life, we had become wholly absorbed until the announcement of the Christmas holidays reminded us of having neglected our friends at home.

The clinics have been well attended, and the several teachers have done their best to make the abundant variety of material interesting to us all, and there has been but one uniform expression of satisfaction. Prof. Billroth has lectured and held his clinics regularly, but we have not noted anything unusual in the way of capital operations, as at the commencement of the semester. In a case of *phosphorus necrosis* of the lower jaw, he successfully removed, from within the buccal cavity, the entire inferior maxilla (with condyles) as a sequestrum. On account of the great size of the diseased portion of bone, it was divided at the symphysis, and each half extracted separately. The involucrum was composed of the new formed lower jaw. Two cases of *genu valgus* were interesting on account of the method of treatment, which was as follows: He makes an incision on the outer side of the limb, through the tissues, and into this opening he introduces a chisel, and with the aid of a mallet fractures the tibia near its head. He then straightens the limb and places it in an immovable (plaster of Paris) apparatus. Of course, in such cases, he does not remove the deformity in the joint, but only straightens the limb. In others he accomplishes the same result by sawing through, instead of fracturing the bone. He says in such cases, we generally find the inner condyle of the femur hypertrophied, and the outer one atrophied, by pressure of the head of tibia, and he thinks that after the limb is restored to its normal axis, the enlarged inner condyle of the femur probably becomes smaller by the new pressure, as caused by the head of the tibia.

In the above cases, where the cure could be called complete, the result was so perfect, that a casual observer would never suspect a previously existing deformity. He therefore recommends the operation which he has performed a number of times, having lost but one case, and that being through septicæmia.

In *pes-equinus*, his treatment is as follows:—After making tenotomy of the tendo-achilles, he employs an apparatus which is applied at night, composed of a wooden foot-piece and two lateral steel splints, fastened to the limb in the usual way, by padded straps. The *flexion* of the foot is kept up by means of two rubber bands fastened (near the knee) to each end of the lateral splints, and descending over the anterior surface of the limb, they cross and are fastened to the corners of the foot piece (near the toes). During the day the patient is compelled to wear a shoe, the sides of which are fastened to and continuous with the lateral splints, which, by means of hinges, are so arranged as to allow of *flexion* only.

The aural department, under Professors Gruber and Politzer, with their experienced assistant, Dr. Bing, comprises one of the finest in the world, and the wards, with the daily clinic, furnish an abundant material, with an unusual variety of interesting cases, and here the enthusiastic student of otology can enjoy the feast of cases that each chair presents daily. Professor Gruber has two commodious wards, one for males and the other for females, each room accommodating about twenty persons, amongst whom are the critical cases, that is, those who require special care and treatment from the assistant, and constant attention from the nurses. Adjoining the male ward is the private class room, in which the Professor keeps his collection of anatomical and pathological specimens, from which he gives us some of his most instructive as well as entertaining lectures. Suitable cases are thoroughly examined and selected from among the out-door patients, and these are seated in a row of numbered seats, where they can be examined in succession.

Corresponding to these numbers, are others which mark the diagnoses, which are written upon a large blackboard, and accompanying each diagnosis, is a picture, in colored crayon, of the parts under consideration. After the class has examined all the cases, and, as it were, compared notes with the blackboard, the Professor minutely describes each particular case, giving both its history and pathology. The daily lectures occupy nearly two hours, one-third of the time being devoted to theory and the remainder to practice or demonstration. The first course has just ended, and besides being thorough was decidedly satisfactory to our large class, which was one of the many in attendance every six weeks. The closing lectures were particularly interesting, especially those giving an account of the rarer forms of ear disease, as othœmatoma, aspergillus, etc., diseases of the labyrinth and semicircular canals; and, on account of their novelty, the devices for "keeping open" perforations of the membrana tympani, artificial membranes (including the form used by Professor G., who does not claim for them the boasted power of improving the hearing, but as a protection to the deeper seated structures), and the different instruments to assist the hearing, which, as you may imagine, comprehended the inventive genius of the world. The anatomy of the external, middle and internal ear, not only macroscopic but also microscopic, was taken up and treated of at length and profusely illustrated by preparations of all kinds.

In answer to the question, how does he teach pathology? We will take the membrana tympani for example. After studying the normal membrane, its topography and

the conditions which give it a neutral gray, opaline, or as Gruber calls it, "combination color," the student is shown a series of cases illustrative of various diseased membranes. Simple injection of the blood-vessels in the neighborhood of the hammer (malleus) and at its periphery (hyperæmia), general inflammation (myringitis), with its characteristic appearances and color; local inflammation, exudation and suppuration between the layers of the membrane (inter-lamellar abscess); perforations of various sizes, traumatic and inflammatory, showing various degrees of destruction, even to necrosis of the handle of the malleus (otitis media acuta, suppurativa); polypi springing from the membrane proper or from the tympanal mucous membrane and sprouting through a perforation; these growths are generally caused by otitis media chronica; formation of connective tissue in its substance, with deposits of fat or calcareous matter, the last named deposits found in patients of a gouty or rheumatic diathesis, or in the tertiary stage of syphilis (otitis media hypertrophica); abnormal contour of membrane caused primarily by lesions in the throat, eustachian tube or tympanum, and secondarily by contraction of the tensor tympani, dislocations of the ossicles, cicatrices with adhesions, etc., (otitis media adhesiva); fungoid growths, such as aspergillus, first called by Voltolini (otitis parasitica); foreign bodies, for example, a bean which had been forced into the tympanum; congenital atresia of the external auditory canal, and after scarlatina, with congenital malformation of the auricle.

This is but a hasty resume of the material *for one day's lesson*, and with such, you will agree with us, that we have not over estimated this department. Add to this the agreeable style, and at the same time precise manner of Prof. Gruber, and it is little wonder that his students, who are scattered all over the world, can but recollect him with pleasure, and his teachings with satisfaction. As regards the limited surgery of the ear, he is conservative, but we can testify concerning the excellent results in many cases which we had the opportunity of watching from day to day. For periostitis of any portion of the temporal bone, from whatever cause, whether idiopathic, syphilitic or complicated with disease of the middle ear or mastoid cells, he recommends an antiphlogistic treatment, counter-irritants and fomentations. If the tympanum is not involved, he suspects it, and makes a point of keeping the parts clean and frequently inspecting the membrana tympani, and if there be discharge from the middle ear, of keeping the meatus free and giving the discharge every possible means of escape, assisting it at times with the air balloon and catheter, or extracting it from within the cavity of the tympanum with a new syringe which he has invented for the purpose (*Monatsschrift für Ohrenheilkunde* No. 12).

As soon, however, as the discharge ceases and he is sure that pus is collecting in the mastoid cells, and there are symptoms of caries, he does not hesitate, but recommends as well as performs the operation of perforating the mastoid process, not with a trephine, but prefers, on account of the small and valve-like opening which it makes, a simple blunt-pointed probe (as first used in the United States by my father*). For the more frequent affection, post-aural periostitis, Wilde's incision is to be made; this is a longitudinal cut, of one to one and a half inches in length, over the mastoid process, down to the bone, being careful, through palpation, not to divide the posterior auricular artery. This accident, besides being dangerous, we have known to have caused the formation of a false aneurism, with its train of annoying symptoms. For the removal of fungoid growths, especially aspergillus, the ear is to be syringed with warm water every two hours, with instillations of spiritus vini rectificatissimi, once a day, and protection for the parts.

In poulticing the ear, as for abscess (furuncle) in the meatus, he lays great stress upon the necessity of making a cone of linen to contain the substances that are used, for they must not come in contact with the membrana tympani. He condemns the indiscriminate instillations of all essential oils and glycerine, on account of its souring. In eczema of the external ear in children, or in women, especially that form so often seen accompanying irregular menstruation, or about the time of the menopause, he uses unguentum glycerinæ for children, and for adults adds five grains of zinci sulph. to the ounce. The salve is not only to be rubbed in, but in every case spread on lint and kept applied for several days, and at the end of that time the parts are not to be washed, but dried, and dusted with amylum, or any toilet powder. For the chronic form use

℞. Amyli puri, ℥iv.
Pulv. iridis florent.
Alum. pulvis, āā. ℥ij. M.

until the new epidermis is fully formed. Where there is great thickening due to chronic infiltration of the part with very little transudation of

* A Clinical Manual of the Diseases of the Ear, pages 192, 193. By L. Turnbull, M. D. Philadelphia, J. B. Lippincott & Co.

At page 78, "The Surgical Diseases of the Ear." By Prof. Von Tröltsch, translated from the German by James Hinton, Aural Surgeon to Guy's Hospital, new Sydenham Society, of London (1874), occurs the following note in reference to the date of the operation for perforation of the mastoid process:—

"Particulars of the history of this operation, and eight such cases, are reported in *Virchow's Archiv*, B. XXI, p. 295, by the author. Turnbull (L.) has since reported a similar case (THE MEDICAL AND SURGICAL REPORTS (should be REPORTER), of Philadelphia, 1862, February 15th, p. 22). Dr. Pagenstecher, three cases in Elberfeld, in *Archiv für Klinische Chirurgie*, B. IV, Heft 2, p. 525-529, and 533. Schwartze another in his *Prakt. Beiträge zur Ohrenheilkunde*, p. 37. A case further reported by Mayer, of Hagenau, in *Archiv für Ohrenheilkunde*, I, p. 226; and also Prof. v. Bruns, to whom I am indebted for a verbal account, has twice, in caries of the petrous bone, enlarged a narrow fistulous opening into the mastoid process, by means of the trephine. See also *Medico-Chirurgical, Transactions*, Vol. 11, 1868, a case reported by J. Hinton, ending in almost complete recovery of hearing."

serum, the case being peculiarly obstinate, it is well to excite reaction by rubbing on a little sapon. viridis (a soap containing a large quantity of potash), then applying ung. diachyli,

℞. Emplastri diachyl. liquef.,
Olei. lini coct., āā. ℥ij.
Olei. lavendulæ, gtts.vj. M.

spread on pieces of linen, being careful to keep it *well in contact* with the parts day and night, until the new epidermis is fully formed. For chronic eczema and its sequelæ, vesicants behind the ear over the mastoid process; when there is pain in the ear from inflammation of the external auditory canal, or myringitis, etc., the following ointment is to be spread upon a pledget of lint and introduced into the meatus at night:—

℞. Ung. emoll.,
Plumb. carb., āā. ℥j
Morph. sulph., grs. iij. M.

Very truly yours,

CHAS. S. TURNBULL, M. D.

NEWS AND MISCELLANY.

Schuylkill Co., Pa., Medical Society.

At a regular stated meeting of this Society, held at Pottsville, Jan. 6, the following officers were elected:—

President, Dr. G. K. McKibben, Ashland.

Vice President, Dr. A. P. Carr, St. Clair.

Treasurer, Dr. W. H. Senderling, Port Carbon.

Secretary, Dr. R. S. Chrisman, Pottsville.

Corresponding Secretary, Dr. J. J. Yocum, Ashland.

Censor, Dr. W. R. Owens, Ashland.

Doctress Mary A. Swayze was elected a member.

Medical Legislation.

In the Senate of New Jersey, Jan. 30th, a bill was introduced providing for the establishment of a Board of Health, to consist of ten persons, to be appointed by the Governor, who shall act without remuneration, shall investigate the causes of all diseases among men and animals, and report annually to the Governor.

In Tennessee a bill is before the State Senate, providing for the establishment of a State Board of Physicians, to issue licenses to all the physicians practicing in the State. It provides for the establishment in each grand division of the State, of a board of regular physicians, who shall have authority to meet annually at Knoxville, Nashville and Memphis, to grant licenses to physicians and fix the fees therefor, when the same are not already fixed by law; to prescribe a course of reading for those studying medicine under private instruction; to grant licenses to practice particular branches of medicine or to treat particular diseases, and to grant licenses to apothecaries. The bill also provides that physicians who practice medicine or surgery, for fee or reward, in violation of this act, shall be liable to an indictment and fine of five hundred dollars for the first offence, and imprisonment not to exceed three months for the second offence.

Notice.

To obviate possible misapprehension, we desire to state that the advertisement in a Wilkesbarre paper which we stigmatized as "discreditable" (current volume, p. 58), had no reference to the Baltimore Eye and Ear Institute, of which Dr. J. J. Chisholm is attending physician.

Personal.

—It gives us pleasure to announce that Dr. Ralph N. Townsend, long a reporter of clinical lectures to this Journal, who visited Europe for his health this winter, is much improved.

—Dr. W. H. Gilmore fell upon the pavement of Thirty-fifth street, in New York, Sunday, January 24th, and accidentally drove the point of his umbrella in his eye. He died of the injury on Thursday night following.

—The wisdom of selecting medical men for coroners, has been again shown by the excellent manner in which Dr. Goddard, Coroner of this city, has been conducting the duties of that office since he entered upon it. His selection of medical assistants has been most judicious, and secures to the public the utmost protection.

Items.

—The Northern Medical Association will meet at the Hall of the Northern Dispensary, Friday, 12th instant.

Dr. S. D. Risley will read a paper on the Anomalies of Refraction, and exhibit a new instrument for their determination.

The medical profession of the city are invited.

—The grand jury have presented the Insane Department of the Philadelphia Alms-house as a disgrace to the city. It accommodates 500 patients, and actually has 1005!

—Twenty patients perished by the burning of the Beaufort Female Lunatic Asylum, near Quebec, in January. Only two of the bodies have yet been found.

—A drug clerk in this city took 20 drops of tincture of aconite, for a cold. He died in an hour and a half.

QUERIES AND REPLIES.

Nervous Paresis.

M. D. reports a case of a temperate widower, age 45, who has constant headache, tinnitus aurium, falling mental power and sexual desire, with increasing muscular debility. It seems a case of progressive disease of the nervous centres.

Dr. Aleph, of Ills.—The *Catholicon* was a secret remedy. Nysten's *Dictionaire de Médecine* states that it was composed of rhubarb, senna, and various carminatives.

Dr. R. C. D., of Pa.—For Dr. Black's treatment of seminal emissions, see the HALF-YEARLY COMPENDIUM, January, 1872, p. 275.

Dr. F. J. inquires the therapeutical properties of *Cosmoline*. Answers requested.